

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**Patent Application**

**Inventor (s)** Freitag et al.

**Docket No.** HSJ9-2003-0070US1

**Serial No.** Not yet assigned

**Art Unit** Not yet assigned

**Filing Date** Not yet assigned

**Examiner** Not yet assigned

**Title:** SPIN VALVE SENSOR HAVING AN ANTIPARALLEL (AP) SELF-PINNED LAYER STRUCTURE COMPRISING COBALT FOR HIGH MAGNETOSTRICTION

**MAIL STOP PATENT APPLICATION**

**Commissioner for Patents**

**P.O. Box 1450**

**Alexandria, VA 22313-1450**

**SIR:**

**INFORMATION DISCLOSURE STATEMENT**

In accordance with 37 CFR 1.97(b), the enclosed Information Disclosure Statement, with attached reference(s), is submitted for consideration in the above-identified application.

A copy of each of the listed documents is enclosed.

**NO FEE IS REQUIRED.**

The Examiner is respectfully requested to make the listed documents of record in connection with the prosecution of the subject application.

Respectfully,



John J. Oskorep

Reg. # 41,234

Date: 30 Sept 2003

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Substitute for form 1449A/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (use as many sheets necessary)				<b>COMPLETE IF KNOWN</b>	
				Application Number	Not Yet Assigned
				Filing Date	Not Yet Assigned
				First Named Inventor	Freitag
				Group Art Unit	Not Yet Assigned
				Examiner Name	Not Yet Assigned
SHEET	1	OF	1	Docket Number	HSJ9-2003-0070US1

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (If known)			
		5,583,725		Coffey et al.	12-10-1996	
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FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No.1	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T6
		Office3	Number4	Kind Code5 (If known)				

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS				T <sup>6</sup>
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published		
		T. DIMOPOULOS et al., Enhanced robustness and tunnel magnetoresistance in artificial ferrimagnet based tunnel junctions, Journal of Applied Physics, 1 May 2000, 4685-4687, 87-9		
		M. Hehn, Properties of transport of magnetic junctions tunnel containing antiferromagnetic artificial structures - Effect of the structure in fields on the form and the amplitude of the magneto resistance, <a href="http://www.lpm.u-nancy.fr">www.lpm.u-nancy.fr</a>		
		M. SAITO et al., PtMn spin valve with synthetic ferrimagnet free and pinned layers, Journal of Applied Physics, 1 May 2000, 6974-6976, 87-9		

Examiner Signature	Date Considered
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Unique citation designation number. <sup>2</sup>See attached Kinds of U.S. Patent Documents. <sup>3</sup>Enter Office that issued the document, by the two letter-code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard St. 16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language translation is attached.